Remarks/Arguments

Summary of the Office Action

Claims 7 and 20 were objected to for improper dependency.

Claims 1-20 were rejected under 35 U.S.C. 112, first paragraph, for containing subject matter that was not described in the specification in a way that would enable one skilled in the art ... to make and/or use the invention.

Claims 1, 8, and 13 were rejected under 35 U.S.C. 112, first paragraph, because they do not define the term Si and the function sum(Wi).

Claims 1-20 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention.

Claims 1 and 8 were rejected under 35 U.S.C. 112, second paragraph, because the term – M—purportedly lacks proper antecedent basis.

Claim 2 was rejected under 35 U.S.C. 112, second paragraph, because it was purportedly unclear what was meant by "determining a relevance of a document independently in relation to other candidate documents."

Claim 13 was rejected under 35 U.S.C. 112, second paragraph, because it was purportedly uncertain "what relationship is established between the claimed total term weight and one of the total relevance score range."

Claims 1, 8, and 13 were rejected under 35 U.S.C. 112, second paragraph, because it was purportedly not understood what was meant by "retrieving a set of most relevant documents based on the association to the relevance score bins having a highest relevance score without retrieving other candidate documents."

Claims 2-7, 9-12, and 14-20 were rejected for having the same defects as the independent claims from which they depended.

Claims 1-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wical (U.S. Patent No. 6,460,034).

Non-Art Objections and Rejections

In paragraph 1 of the office action the Examiner notes that claims 1-20 are presented for examination. Based on the arguments and amendments presented herein, Applicant respectfully requests that these claims be allowed.

In paragraph 2 of the office action the Examiner notes that the application does not include line numbers and recommends that future correspondence contain such line numbers. Applicant reminds the Examiner that the application employs the paragraph numbering technique as specified in 37 CFR 1.52(b)(6) and MPEP 608.01.

In paragraph 3 of the office action the Examiner asserts that the specification is "replete" with terms that are not clear, concise and exact. "Replete" generally means "completely filled with" yet, the Examiner provides only one example of purportedly imprecise terms (Si and sum(Wi)). The Applicant directs the Examiner to amended paragraph [0039] which describes these terms more fully without adding new matter. The specification teaches and supports these descriptions of Si, Wi, and Sum(Wi) by, for example, equations 1-4 and the accompanying explanations and examples. Thus, one skilled in the art would appreciate and understand the meanings of the terms Si, Wi, and Sum(Wi) even absent the amendments.

In paragraph 4 of the office action the Examiner invites the Applicant to review the application for other terms that are not clear, concise and exact. The Applicant directs the Examiner to the amended paragraphs 6, 7, 26, 39, and 44, which are made based on the Examiner's suggestions. Applicant has reviewed the application and believes it is full, clear, concise, and exact and fully satisfies all requirements of 35 U.S.C. 112.

In paragraphs 5 and 6 of the office action the Examiner notes that claims 7 and 20 are objected to and requests that the claims be rewritten in independent form. The Applicant directs the Examiner to amended claims 7 and 20 that have been rewritten in independent form as requested by the Examiner.

35 U.S.C. § 112, First Paragraph

In paragraph 7 of the office action the Examiner notes that claims have been rejected under 35 U.S.C. § 112, first paragraph. Specifically, in paragraph 8 the Examiner rejects claims

1-20 under 35 U.S.C. § 112 first paragraph as containing subject matter that was not described in the specification. Yet the Examiner only describes terms Si and Sum (Wi), which do not appear in any claims. For example, in Paragraph 9 of the office action, the Examiner rejects claims 1, 8, and 13 because the terms Si, and the function sum(Wi) have not been defined. The Applicant notes that these terms do not appear in claims 1, 8, and 13, nor in any other claim. Thus, this rejection has no basis and should be withdrawn. All claims comply with the requirements of 35 U.S.C. 112.

35 U.S.C. § 112, Second Paragraph

In paragraph 10 of the office action the Examiner notes that claims have been rejected under 35 U.S.C. § 112, second paragraph. Specifically, in paragraph 11, the Examiner rejects claims 1-20 for being indefinite. Yet the Examiner only cites the term M in claims 1 and 8 as grounds for the rejection. This leaves independent claim 13 and the claims that depend from it without a basis for the rejection in paragraph 10. Claims including the term "M" have been amended to clarify the term. Thus, the Applicant respectfully requests that these rejections be withdrawn.

In paragraph 13 of the office action the Examiner discusses claim 2. Claim 2 has been amended to clarify the language and should now comply with 35 U.S.C. 112, second paragraph.

In paragraph 14 of the office action the Examiner discusses claim 13. The Examiner recites that the relationship between the total term weight and the total relevance score range is not understood. Claim 13 recites the step of "establishing a relationship" between a total term weight and a score bin. This language is not indefinite or uncertain because in the computer and software arts, there are many ways to establish a relationship between two or more objects, entities, or variables that are known to those skilled in the art. The present specification describes some examples of relationships in, for example, paragraph [0044]. Claim 13 is not limited to the type of relationship but recites the step of establishing a relationship. Thus, Applicant asserts that claim 13 is not indefinite and this rejection should be withdrawn.

In paragraph 15 of the office action the Examiner reports "retrieving a set of most relevant documents based on the association to the relevance score bins having a highest

relevance score without retrieving other candidate documents" is not understood in claims 1, 8 and 13. The Applicant asserts that this language is clear and unambiguous on its face, and complies with 35 U.S.C. 112, second paragraph. As to how this can be performed, the present specification supports and provides a number of examples for this language. For example, paragraphs [0024], [0028], [0033], and [0036] support the claimed language. Of course, the claims are not intended to be limited by these examples. Therefore, Applicant asserts that claims 1, 8, and 13 are clear, and the rejection should be withdrawn.

In paragraph 16 of the office action the Examiner discusses claims 2-7, 9-12, and 14-20, which depend from rejected independent claims. Applicant asserts that since independent claims 1, 8, and 13 are now in condition for allowance that these dependent claims are also now in allowable form.

The Present Claims Patentably Distinguish Over The References Of Record

35 U.S.C. § 103(a)

In paragraph 17 of the office action the Examiner notes that claims 1-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wical (U.S. Patent No. 6,460,034). The Applicant asserts that Wical does not teach or suggest each and every claimed element and/or limitation and thus the 35 U.S.C. § 103(a) rejections should be withdrawn.

Claims 1 - 6

With respect to independent claim 1, Wical does not disclose retrieving a set of most relevant documents based on the association to the relevance score bins having a highest relevance score without retrieving other candidate documents as claimed in claim 1. Thus, claim 1 is not obvious in light of Wical. Similarly, claims 2-6 which depend from claim 1 contain the same claimed element and thus are not obvious in light of Wical.

Additionally, claim 2 includes determining a relevance of a document independently in relation to other candidate documents, which is not disclosed in Wical. For this additional reason claim 2 is not obvious in light of Wical.

Similarly, claim 3 includes determining a set of most relevant documents ... without determining an exact relevance score for all the candidate documents, which is not disclosed in Wical. For this additional reason claim 3 is not obvious in light of Wical.

Claim 4 depends from claim 1, and claim 1 has been shown to be not obvious in light of Wical, and thus claim 4 is similarly not obvious.

Claim 5 includes defining a total relevance score range, which is not disclosed in Wical. For this additional reason claim 5 is not obvious in light of Wical.

Similarly, claim 6 includes dividing the total relevance score range into one or more relevance score bins having equal sizes. This is not disclosed in Wical and thus claim 6 is not obvious in light of Wical for this additional reason.

Claim 7

Claim 7 concerns a computer-readable medium having computer executable instructions for performing a method that includes, among other things, retrieving a set of most relevant documents based on the association to the relevance score bins having a highest relevance score without retrieving other candidate documents. Wical does not teach this claimed element and thus claim 7 is not obvious in light of Wical.

Claims 8 - 12

Claim 8 discloses a retrieval logic for retrieving a set of relevant objects associated to the relevance score ranges having a greatest matched term weight without retrieving the candidate objects from other relevance score ranges. Wical does not teach this claimed element and thus claim 8 is not obvious in light of Wical.

Claim 9 depends from claim 8 and since claim 8 has been shown to be not obvious in light of Wical, neither is claim 9 obvious in light of Wical.

Claim 10 discloses a logic for defining a total relevance score range. Wical does not disclose such a logic, and thus claim 10 is not obvious in light of Wical.

Claim 11 discloses the retrieval logic including logic for retrieving only objects from the candidate objects that match a highest value of the term weights. Wical does not disclose a similar logic and thus claim 11 is not obvious in light of Wical.

Claim 12 includes the ranking logic having means for associating document relevance scores to the relevance ranges based on matched term weights. Wical does not teach, suggest, or disclose this element and thus claim 12 is not obvious in light of Wical.

Claims 13 - 19

Claim 13 concerns a method that includes the step of retrieving most relevant documents based on score bins. Wical does not disclose score bins, let alone retrieving a most relevant document based on a score bin, thus claim 13 is not obvious in light of Wical.

Claim 14 depends from claim 13 and includes identifying the most relevant documents without having to determine a final relevance score for all the candidate documents. Wical does not disclose this element, and thus claim 14 is not obvious in light of Wical.

Claim 15 depends from claim 13 and includes the additional limitation of retrieving documents that match a highest term weight associated to a highest score bin without retrieving documents associated to other score bins. As mentioned above, Wical does not disclose score bins. Furthermore, Wical does not disclose retrieving documents that match a highest term weight without retrieving documents associated to other score bins. For these additional reasons claim 15 is not obvious in light of Wical.

Claim 16 depends from claim 13 and includes the additional limitation that documents with sufficiently different total term weights will be associated with different score bins, so that more relevant documents are stored in one set of bins while less relevant documents are stored in another set of bins. Wical does not disclose score bins, let alone partitioning relevant documents into score bins based on pre-classification scores, thus claim 16 is not obvious in light of Wical.

Claim 17 depends from claim 13. Claim 13 has been shown to be not obvious in light of Wical and thus neither is claim 17 obvious in light of Wical.

Claim 18 depends from claim 13 and contains the additional element that the associating allows the most relevant documents to be identified independently from other candidate

documents. Wical does not disclose this element and thus claim 18 is not obvious in light of Wical.

Claim 19 depends from claim 13. Claim 13 is not obvious in light of Wical and thus neither is claim 19.

Claim 20

Claim 20 concerns a computer-readable medium that has computer executable instructions for performing a method that includes retrieving most relevant documents based on score bins. Wical does not disclose score bins, let alone retrieving a most relevant document based on a score bin, thus claim 20 is not obvious in light of Wical.

Independent Claims 1, 8, and 13

In Paragraph 19 of the office action the Examiner discusses claims 1-3, 5-8, 10-16, and 18-20. The Examiner points to certain sections of Wical that purport to disclose claimed elements. However, these sections do not teach, suggest, or disclose each and every claimed element and limitation in the application and thus Wical does not render the claims obvious.

Claim 1 recites several elements. None of the items that the Examiner points to in Wical are present in Claim 1. For example, neither a logic for processing a search query, an object retrieval logic, a ranking logic, nor a retrieval logic are claimed in Claim 1. Thus there is simply no basis for the 35 U.S.C. 103(a) rejection of claim 1, or any of the claims that depend therefrom.

Claim 8 recites a "logic for processing a search query having one or more terms." The Examiner states that Wical discloses a search query processing logic that includes a search query term parser at col. 27, lines 24-39. However, the referenced section discusses a theme parser that parses retrieved documents to identify themes and is silent with respect to parsing a query. The Examiner also asserts that col. 6, lines 23-33 disclose a logic for processing a search query. However, the referenced section appears to concern a processing system that provides a thematic profile. Processing a thematic profile is not processing a search query. Therefore, Wical fails to

teach or fairly suggest this element of claim 8, and claim 8 patentably distinguishes over the references of record.

Claim 8 also recites an "object retrieval logic for identifying candidate objects that match the search query." The examiner states that col. 8, lines 58-65 teach an object retrieval logic. However, the query processing module in the referenced section appears to concern case sensitive query term matching, which is unrelated to matching candidate objects to a search query. Therefore, Wical fails to teach or suggest this element of claim 8 showing that claim 8 is patentably distinguishable over the references of record for this additional reason.

Similarly, claim 8 recites a "ranking logic for assigning a term weight to each of the terms and associating each combination of matched term weights to a relevance score range..." The Examiner states that col. 3, lines 10-15 disclose a ranking logic that assigns term weights and that associates matched term weights to relevance score ranges. But the referenced section appears to concern ranking theme groups based on the relevance of a theme group to a query and is silent concerning assigning term weights or making associations based thereupon. Likewise, the Examiner asserts that col. 15, lines 58-61 and col. 23, lines 26-54 teach the ranking logic described above. However, the referenced sections appear to teach calculating total theme strength and relevance ranking groups based on pre-determined criteria. Thus, Wical fails to teach or suggest this additional element of claim 8, and therefore claim 8 is patentably distinguishable over the references of record for this additional reason.

Likewise, claim 8 recites a "retrieval logic for retrieving a set of relevant objects associated to the relevance score ranges having a greatest matched term weight without retrieving the candidate objects from other relevance score ranges." The Examiner states that col. 25, lines 34-55 teach a retrieval logic. However, the referenced section appears to concern generating a profile of a subject and retrieving a set of most relevant objects based on the profile.

Claim 13 is an independent claim that recites several elements. None of the items identified by the Examiner in Wical are present in Claim 13. For example, neither a logic for processing a search query, an object retrieval logic, a ranking logic nor a retrieval logic are

claimed in Claim 13. Thus there is simply no basis for the 35 U.S.C. 103(a) rejection of claim 13, or any of the claims that depend therefrom.

Thus, contrary to the Examiner's assertions that Wical teaches some of the claimed elements in the application, the sections referenced by the Examiner appear to teach none of the claimed elements. Additionally, even if the referenced sections taught the elements asserted by the Examiner, Wical would still not teach or suggest each and every claimed element of the independent claims and thus none of the independent claims would be obvious in light of Wical.
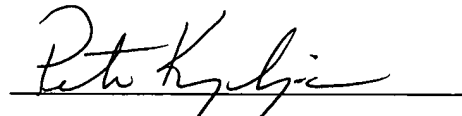
In conclusion, Applicant asserts that all the independent claims have been shown to be non-obvious and thus are allowable. Furthermore, the claims that depend from these non-obvious claims should also be allowed. Additionally, Applicant asserts that the dependent claims include additional elements that make them patentably distinguishable over the reference of record, and for those additional reasons are likewise allowable.

Applicant therefore respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

SEPT. 16, 2003
Date

Peter Kraguljac (Reg. No. 38,520)
(216) 363-4162

18